Docket No. 210121.465C6 Inventor(s): Alexander Gaiger et al. Express Mail No. EL897868473US

HU: MGSDVRDLNALLPAVPSLGGGGGCALPVSGAAQWAPVLDFAPPGASAYGSL MO: MGSDVRDLNALLPAVSSLGGGGGCGLPVSGAAQWAPVLDFAPPGASAYGSL

HU: GGPAPPPAPPPPPPPPPPHSFIKQEPSWGGAEPHEEQCLSAFTVHFSGQFTGTAG MO: GGPAPPPAPPPPPPPPPHSFIKQEPSWGGAEPHEEQCLSAFTLHFSGQFTGTAG

HU: ACRYGPFGPPPPSQASSGQARMFPNAPYLPSCLESQPAIRNQGYSTVTFDGTPS MO: ACRYGPFGPPPPSQASSGQARMFPNAPYLPSCLESQPTIRNQGYSTVTFDGAPS

HU: YGHTPSHHAAQFPNHSFKHEDPMGQQGSLGEQQYSVPPPVYGCHTPTDSCTG MO: YGHTPSHHAAQFPNHSFKHEDPMGQQGSLGEQQYSVPPPVYGCHTPTDSCTG

HU: SQALLLRTPYSSDNLYQMTSQLECMTWNQMNLGATLKGVAAGSSSSVKWTE MO: SQALLLRTPYSSDNLYQMTSQLECMTWNQMNLGATLKGMAAGSSSSVKWTE

HU: GOSNHSTGYESDNHTTPILCGAOYRIHTHGVFRGIQDVRRVPGVAPTLVRSAS MO: GQSNHGIGYESDNHTAPILCGAQYRIHTHGVFRGIQDVRRVSGVAPTLVRSAS

HU: ETSEKRPFMCAYPGCNKRYFKLSHLQMHSRKHTGEKPYQCDFKDCERRFSR MO: ETSEKRPFMCAYPGCNKRYFKLSHLQMHSRKHTGEKPYQCDFKDCERRFSR

HU: SDQLKRHQRRHTGVKPFQCKTCQRKFSRSDHLKTHTRTHTGKTSEKPFSCR MO: SDQLKRHQRRHTGVKPFQCKTCQRKFSRSDHLKTHTRTHTGKTSEKPFSCR

HU: WPSCQKKFARSDELVRHHNMHQRNMTKLQLAL MO: WHSCQKKFARSDELVRHHNMHQRNMTKLHVAL

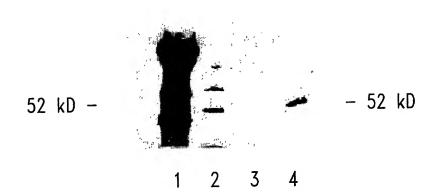
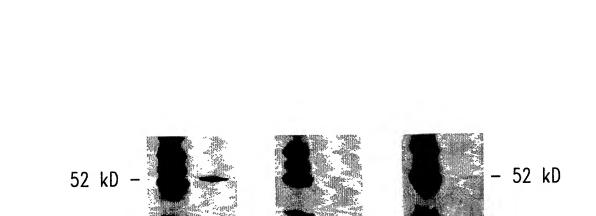


Fig. 2



control antibody non immunized immunized B6 sera B6 sera

3

4

5

6

2

Fig. 3

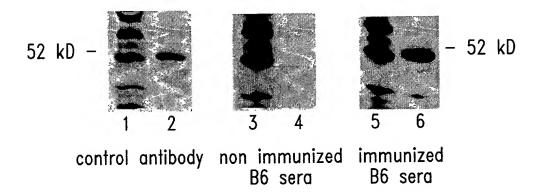
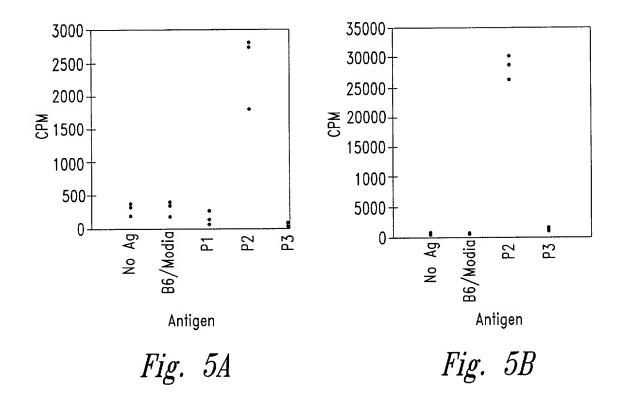


Fig. 4



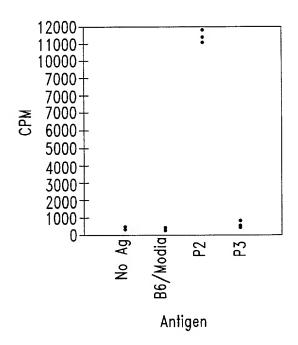
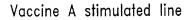


Fig. 5C

Inventor(s): Alexander Gaiger et al.

Express Mail No. EL897868473US

Docket No. 210121.465C6



Vaccine B stimulated line

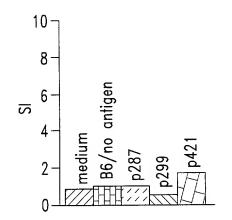


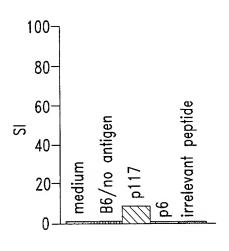
Fig. 6A

Fig. 6B

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p117-139 stimulated line

p117-139 stimulated clone



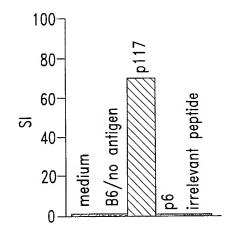
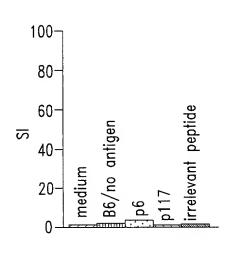


Fig. 7A

Fig. 7B

p6-22 stimulated line

p6-22 stimulated clone



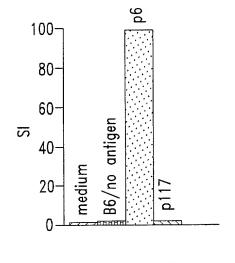


Fig. 7C

Fig. 7D

5 MGSDVRD AA	LNALL AAAAA 	AAAAA/ 	LGGGG VAAAA	GCALF	VSGAA AAA RRR	AQWAPN AAA R	'LDFAF	PGASA AAA	AYGSLO AAAAA 	GPAPF AAAA.	PAPPF	PPPPF	PHSFI	KQE
	85 PHEEC	90 OCLSAF AA 	95 TVHFS	100 GQFTG AAA R	105 GTAGAC A PRRR	110 CRYGPF	115 GPPPF	120 PSQASS	125 SGQARN AAA RR	130 IFPNAI RRR	135 PYLPSO .AAAA	140 CLESQF VAA	145 PAIRNO 	150 GYS
155 TVTFDGT	PSYGI	A	IAAQFI AAAA . RRR	PNHSFI	(HEDPI	MGQQG	SLGEQ	QYSVP	PPVYG(CHTPT	DSCTG: A	SQALLI DDDDDI	LRTPYS DDDDDDD	SSDN .AA
	235 LECM [*] VA	240 TWNQMN	245 ILGATI A .RRRF	250 _KGVA AA . AA RRRRR DDDDD	255 AGSSSS A RR	260 SVKWTI RRRI D	265 EGQSNI	270 HSTGY	275 ESDNH	280 TTPIL	285 CGAQY	290 RIHTH AA F	295 GVFRG: AAAAA RRRR	300 IQDV AAAA
	310 APTLVI . AAAA RRR DDDDI	315 RSASET AAAAA DD	320 SEKR VA	325 PFMCA	330 YPGCN	335 KRYFK .RRRR	340 LSHLQ	345 MHSRK 	350 HTGEK	355 PYQCD	360 FKDCE A	365 RRFSR AAA . A	370 SDQLKI AAAAA	375 RHQR AAA .
	385 PFQCK	390 TCQRKF 	395 FSRSD A.AAA 	400 HLKTH AAA	405 TRTHT	410 GKTSE AAAA.	415 KPFSC	420 RWPSC A	425 QKKFA AA RRR	430 RSDEL .AAAA RRR	435 VRHHN AAAA. RR	440 MHQRN AAA	445 MTKLQ	450 LAL

Fig. 8A

5 MGSDVRD AAA	4AAAA.	PAVSSI VAAAAV	LGGGG VAAAA	GCGLP	VSGAA AAA RRR	QWAPV AAA R	'LDFAF	PGASA AAA	YGSLG AAAAA 	GPAPI AAAA .	PPAPP	PPPPPI 	PPHSFI	
80 PSWGGAE	85 PHEEQ(90 CLSAF	95 TLHFS	100 GQFTG AAA R	 105 TAGAC A RRR	110 RYGPF	115 GPPPF	120 PSQASS	125 GGQARN AAA RR ODDD	130 IFPNAI	135 PYLPS(140 CLESQI	145 PTIRNO	150 QGYS
	160 APSYGH	165 TPSHH A RI	170 AAQFF AAAA RRR	175 PNHSFK	180 (HEDPN	185 4GQQGS	190 SLGEQ	195 QYSVP	200 PPVYG0	205 CHTPT VAAAA	210 DSCTG A	215 SQALL	220 LRTPYS	225 SSDN AA
	235 QLECMT VA	240 WNQMN	245 ILGATL A/ .RRRR [250 .KGMAA VA . AAA IRRRRR DDDDDD	255 AGSSSS A RR	260 SVKWTI . RRRF	265 EGQSNI	270 HGIGY	275 ESDNH	280 TAPIL	285 CGAQY 	290 RIHTH AA l	295 GVFRG: AAAAA RRRR	300 IQDV AAAA
305 RRVSGVA AAAAA. RRR DDDDD	. AAAAA RR DDDDDD	SASET WAAAA D	SEKRI VA	PFMCA	YPGCNI	KRYFK .RRRR	LSHLQ	MHSRK	HTGEK	PYQCD	A	RRFSR AAA.A	SDQLKI AAAAA 	AAA .
380 RHTGVKI	PFQCKT	CQRKF .AAAA	SRSDI . AAAA	HLKTH AAA	TRTHT	GKTSE NAAA.	KPFSC	RWHSC	QKKFA AA RRRI	RSDEL . AAAA R RR 	VRHHN AAAA. RR	IMHQRN AAA 	A	VAL

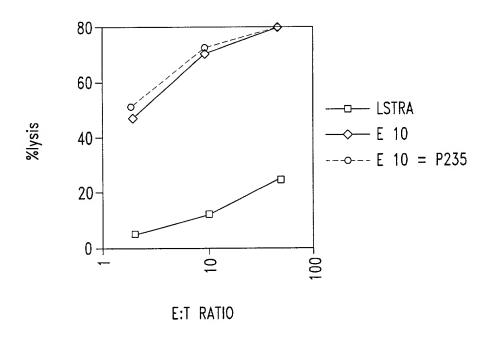


Fig. 9A

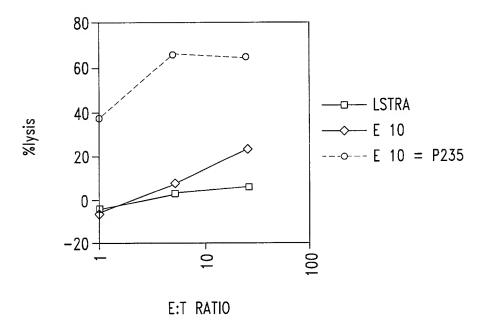


Fig. 9B

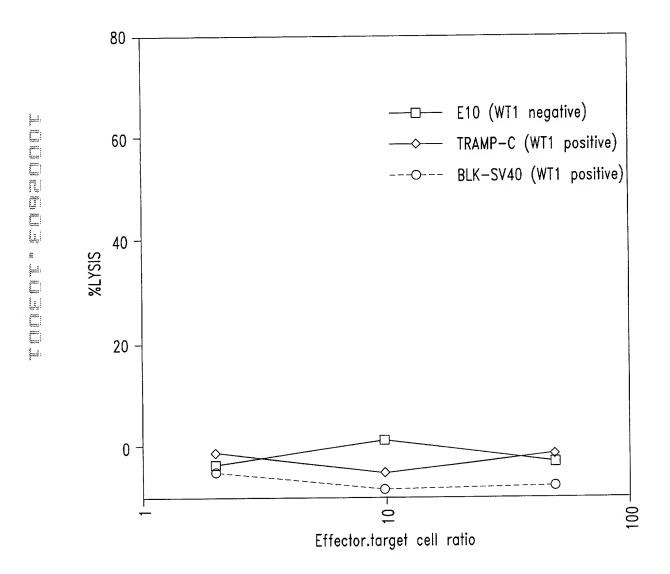


Fig. 10A

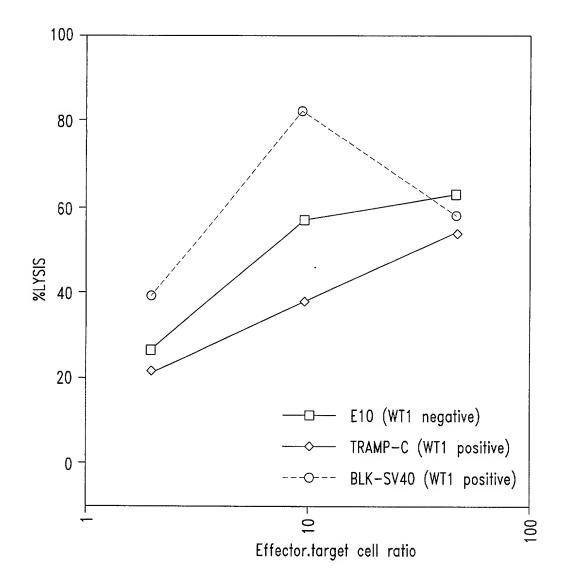
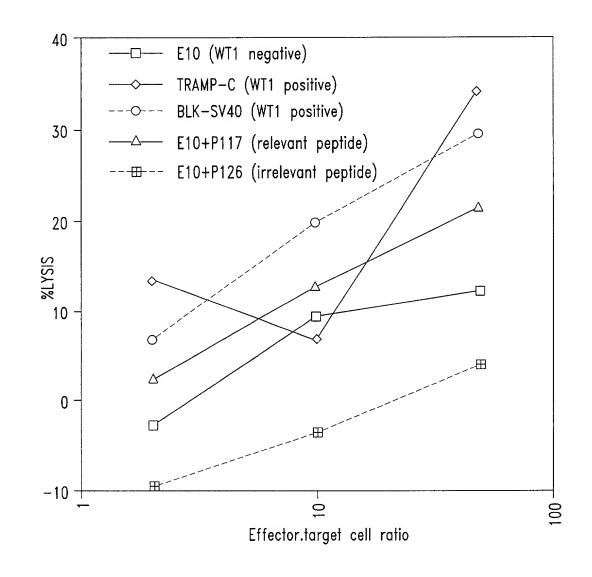
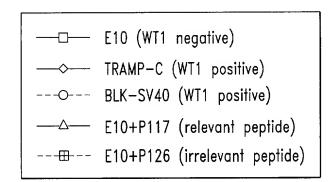


Fig. 10B



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Fig. 10C



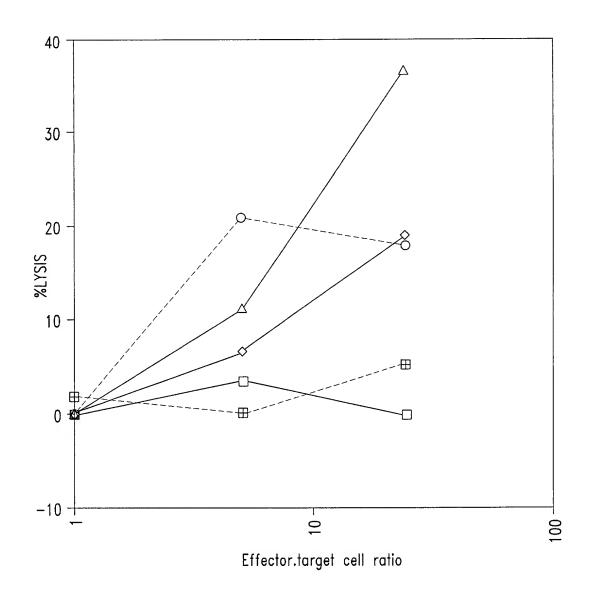
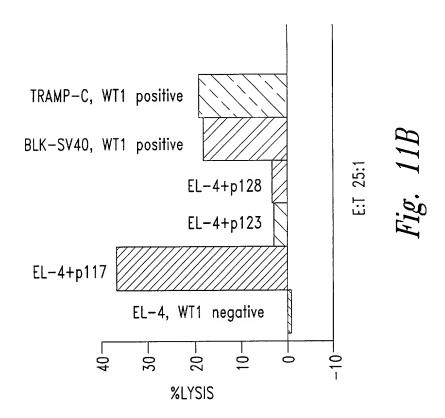
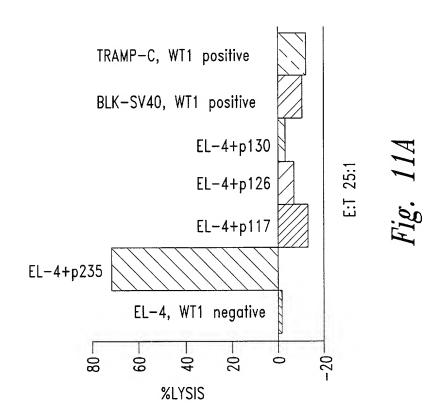
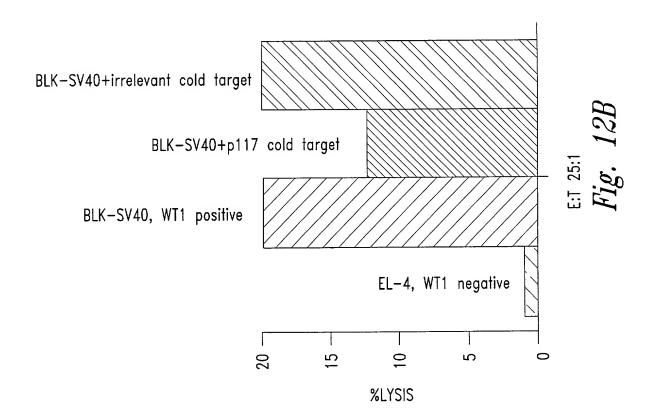
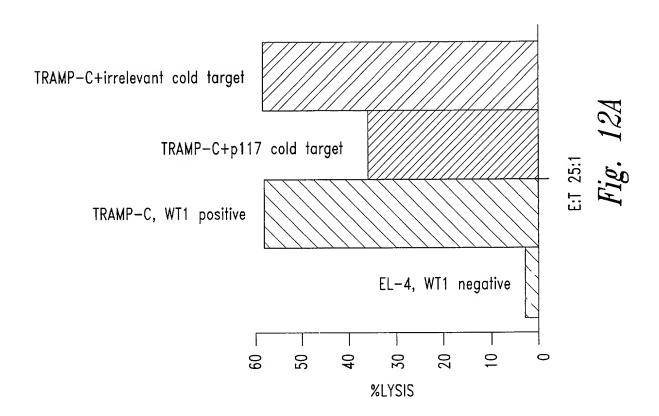


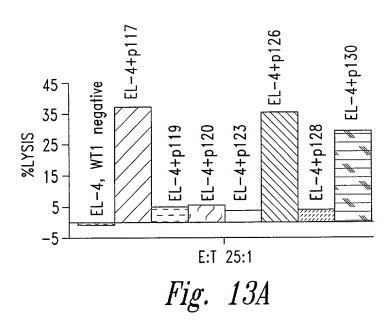
Fig. 10D

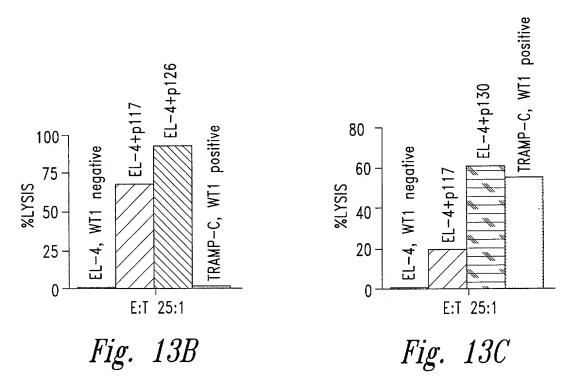












Title: COMPOSITIONS AND METHODS FOR WT1 SPECIFIC IMMUNOTHERAPY

Inventor(s): Alexander Gaiger et al. Express Mail No. EL897868473US Docket No. 210121.465C6

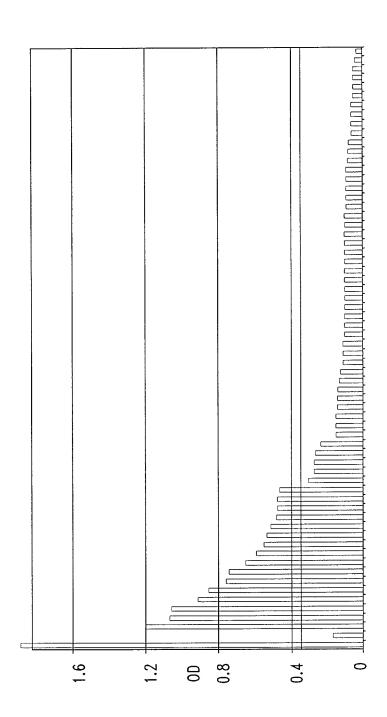


Fig. 14

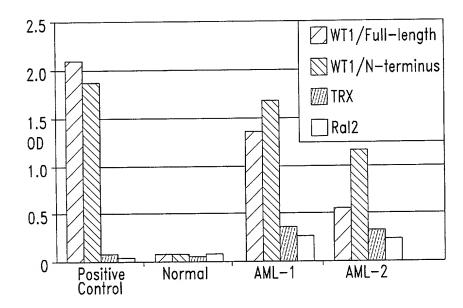


Fig. 15

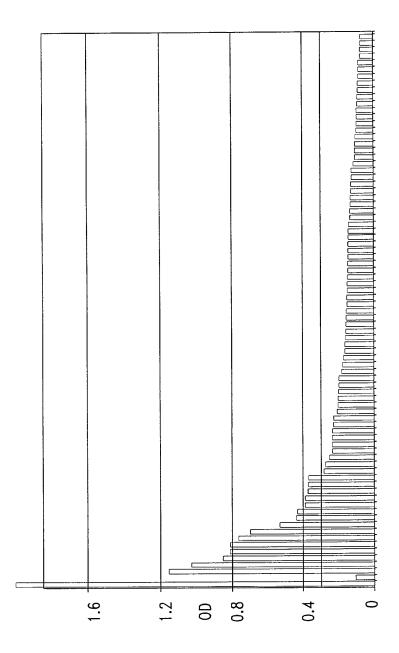


Fig. 16

Inventor(s): Alexander Gaiger et al. Express Mail No. EL897868473US Docket No. 210121.465C6

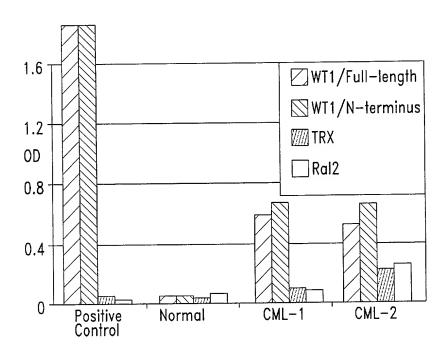
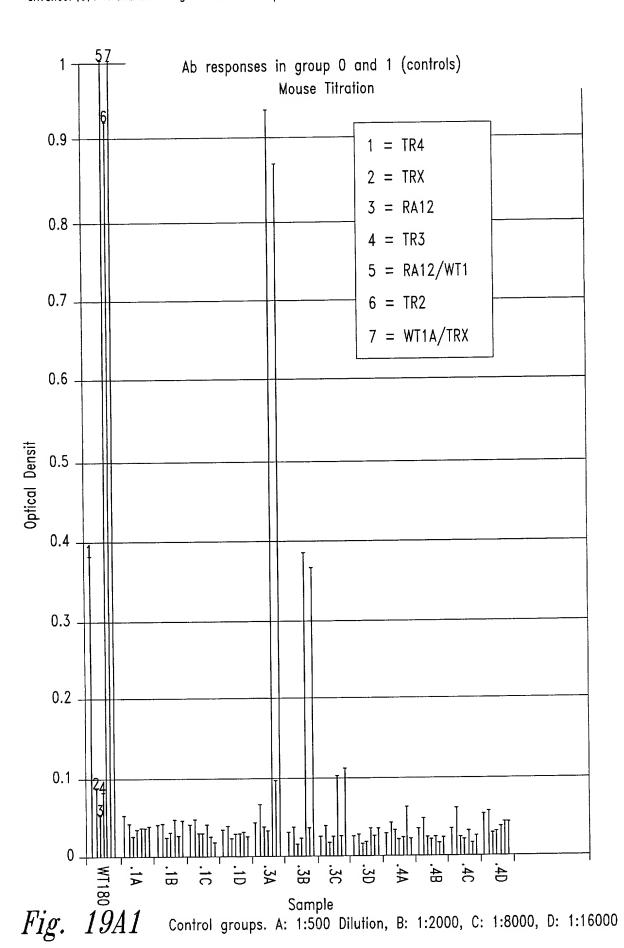
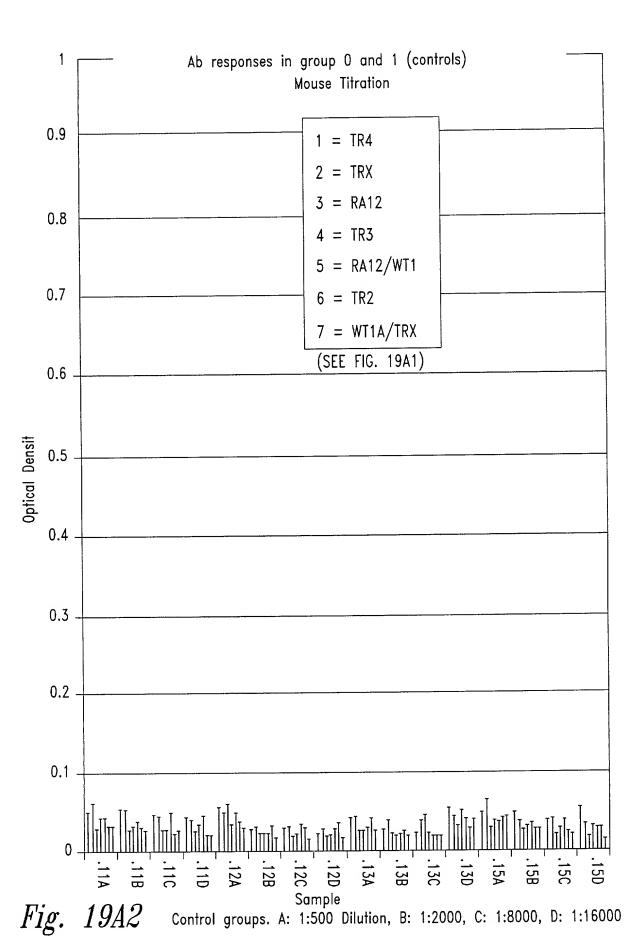


Fig. 17

Molecular Weight 85kDa 60kDa 50kDa

	2,00017
or Serological Analysis	WT1 Amino Acid Position aa 1—449 aa 1—249 aa 267—449
IABLE 1: Characteristics of Recombinant WT1 Proteins Used for Serological Analysis	Recombinant Protein Ral2—WT1 full length fusion protein TRX—WT1 N—terminus fusion protein WT1 C—terminus protein
TABLE 1: Characteri	NAME WT1/full—length WT1/N—terminus WT1/C—terminus





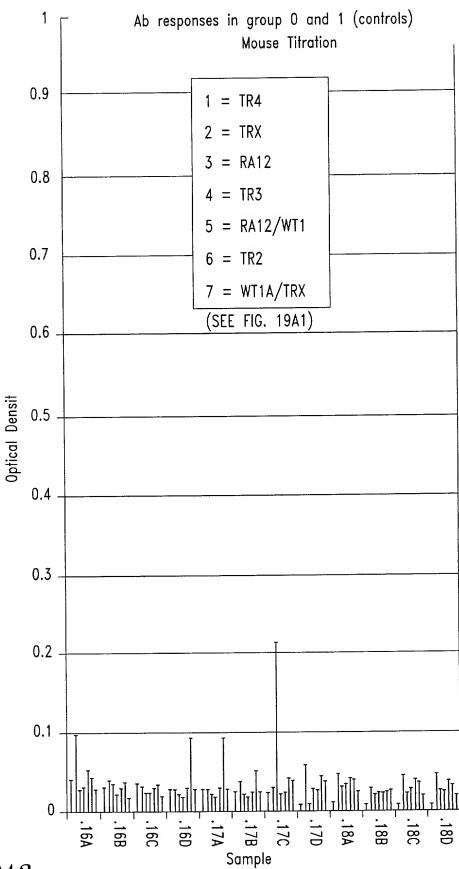
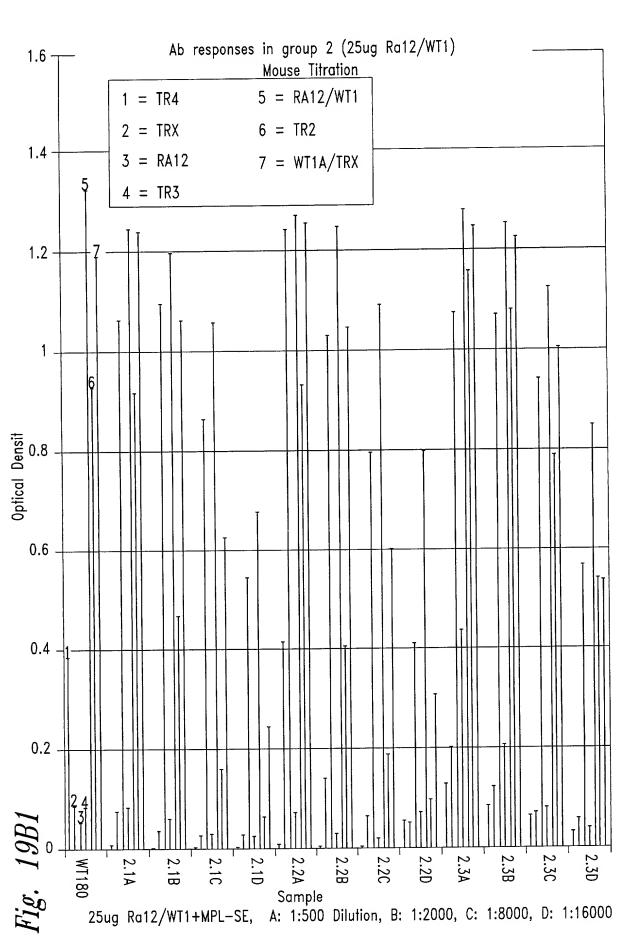


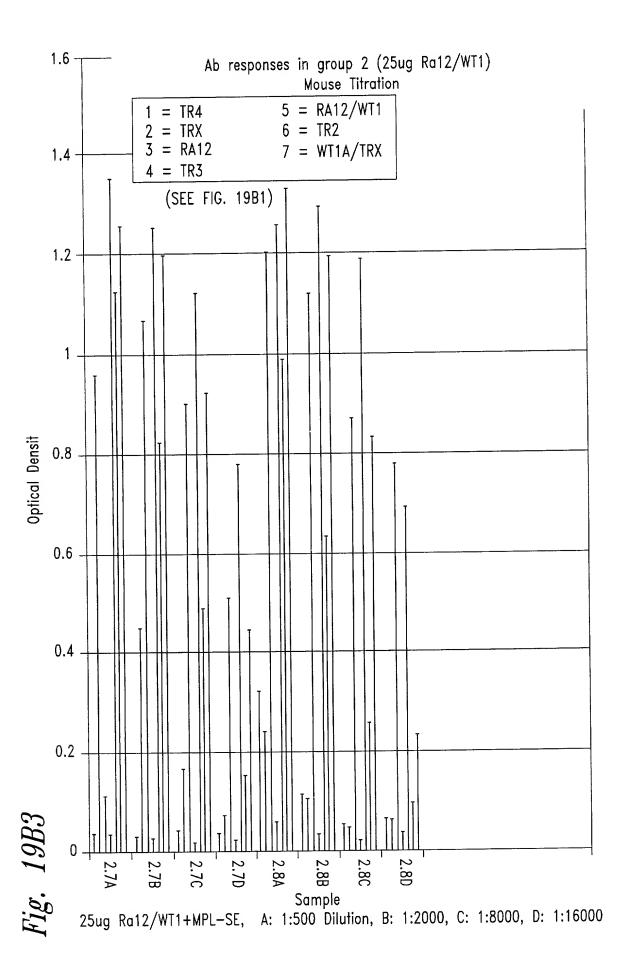
Fig. 19A3 Control groups. A: 1:500 Dilution, B: 1:2000, C: 1:8000, D: 1:16000

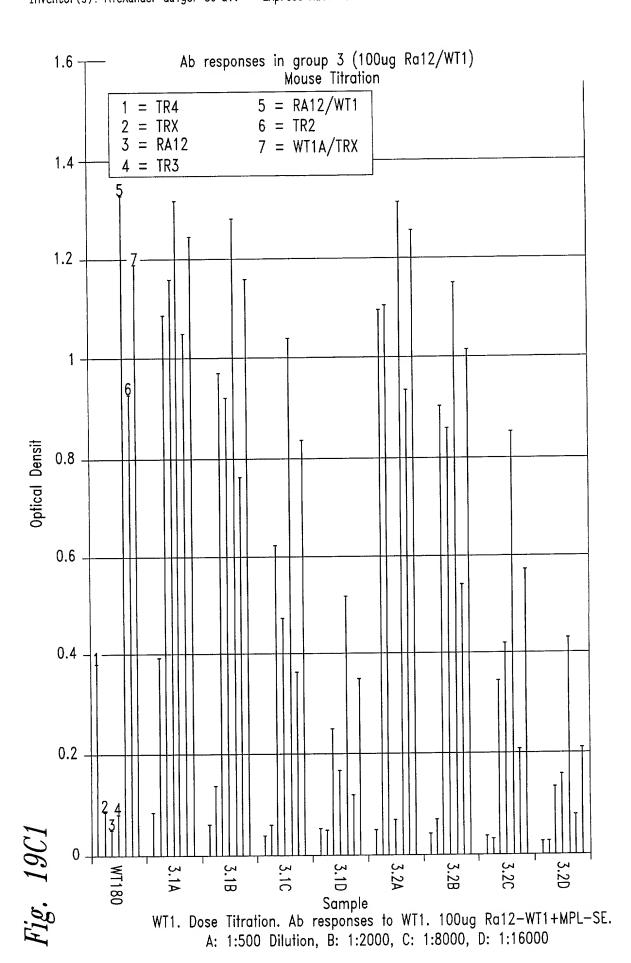


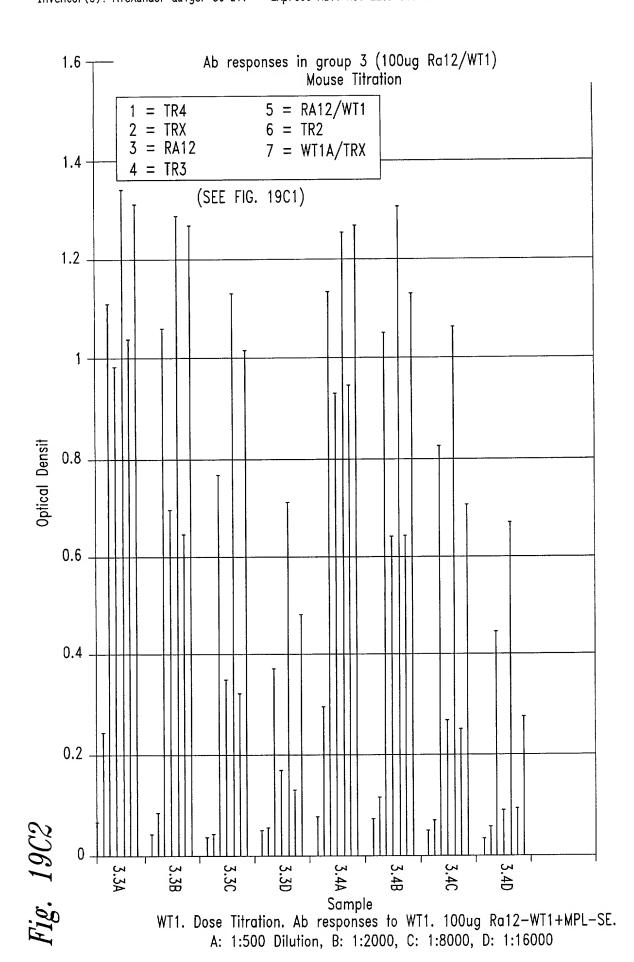
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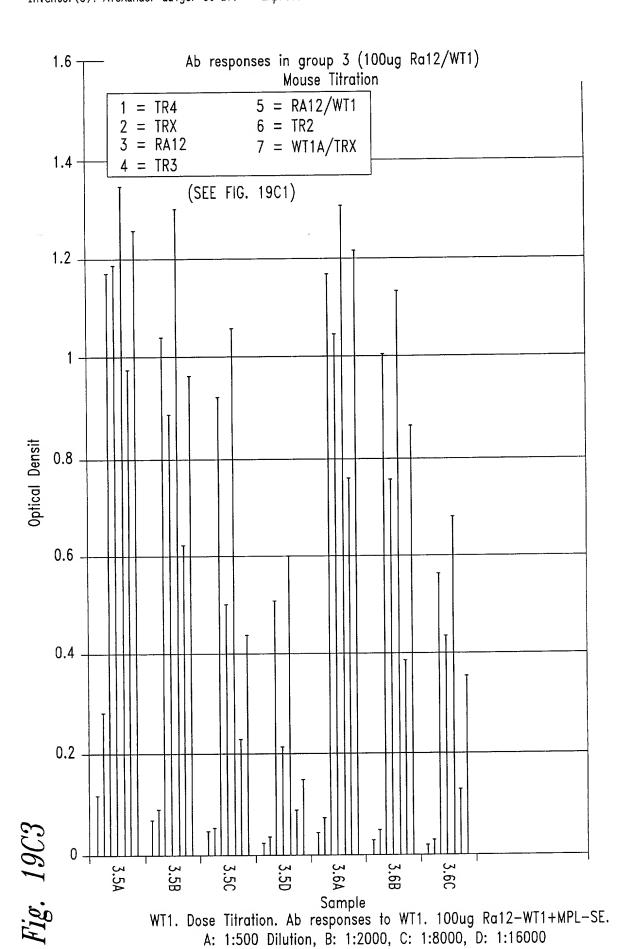
1.6 Ab responses in group 2 (25ug Ra12/WT1) Mouse Titration 5 = RA12/WT1= TR46 = TR2= TRX3 = RA127 = WT1A/TRX1.4 4 = TR3(SEE FIG. 19B1) 1.2 1 0.8 0.6 0.4 0.2 2.502.6A2.6B2.60 2.4C 2.40

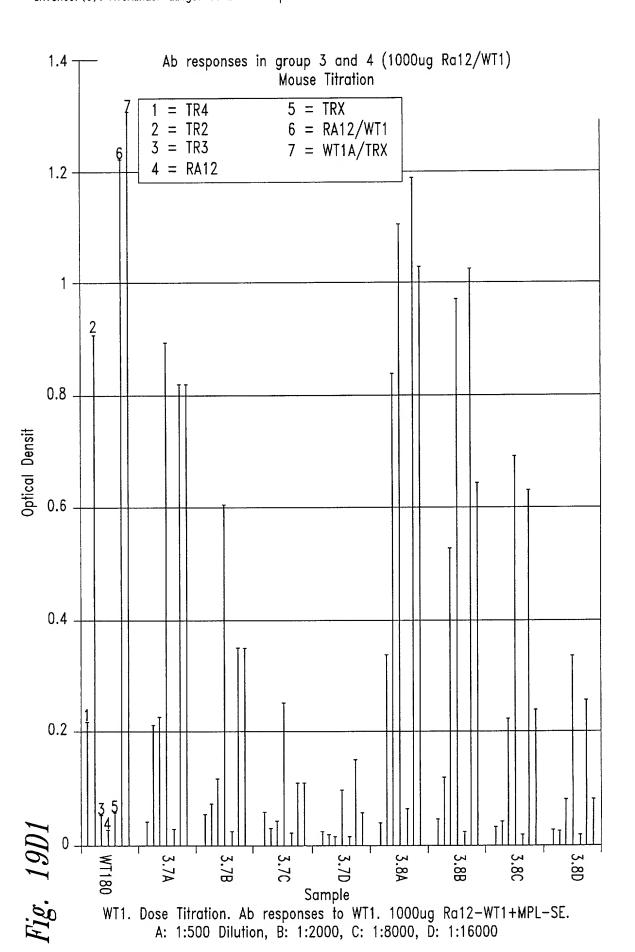
Sample 25ug Ra12/WT1+MPL-SE, A: 1:500 Dilution, B: 1:2000, C: 1:8000, D: 1:16000



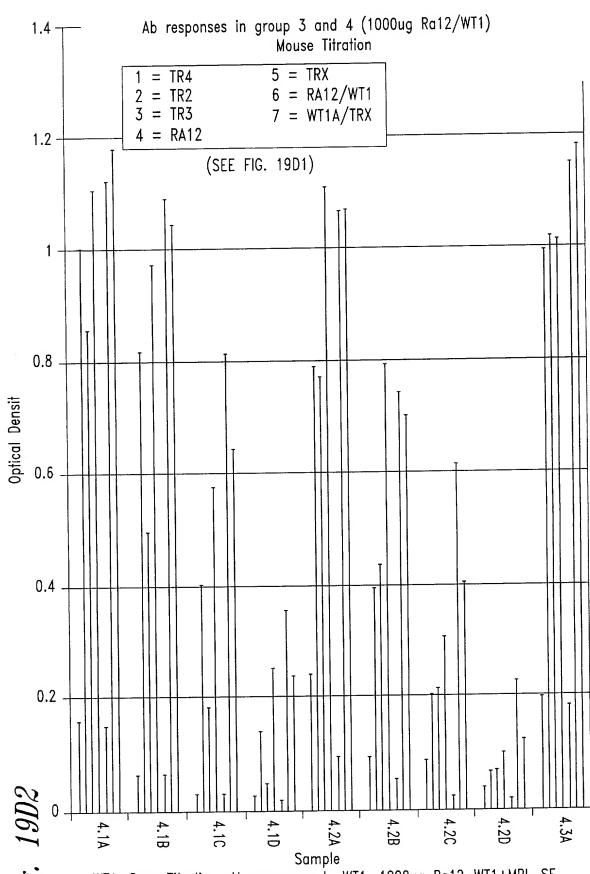




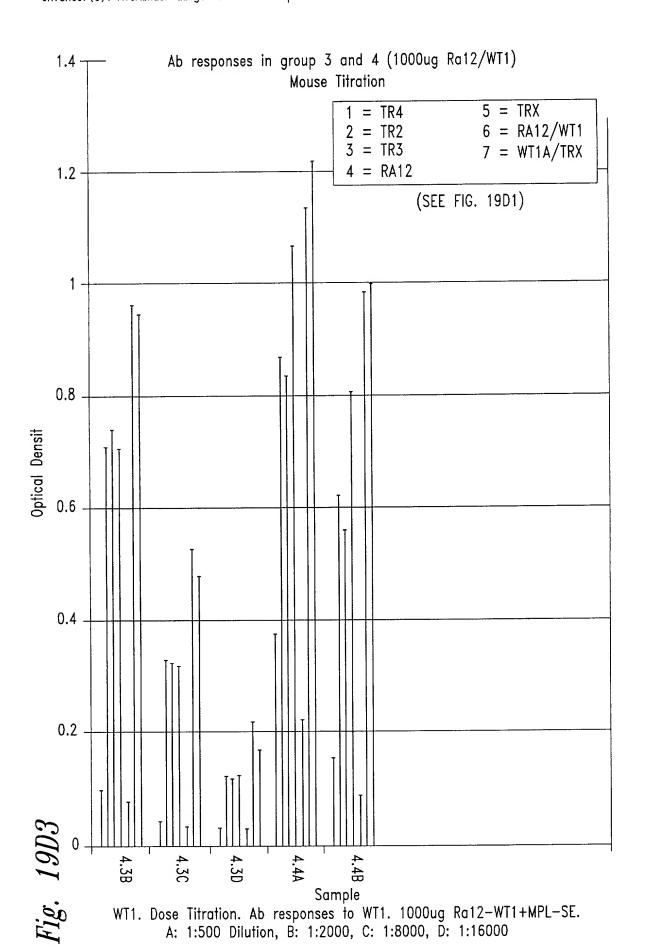


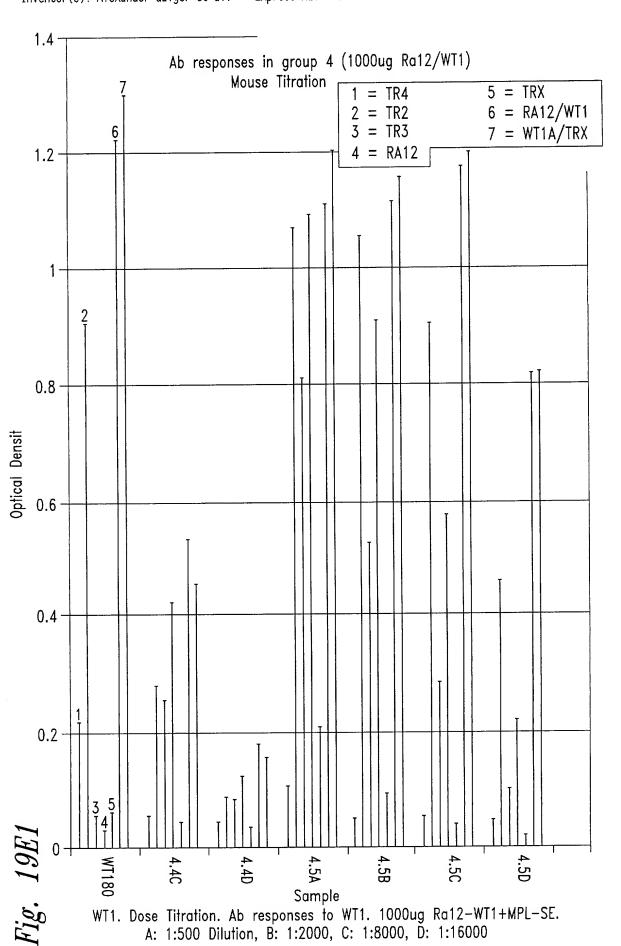


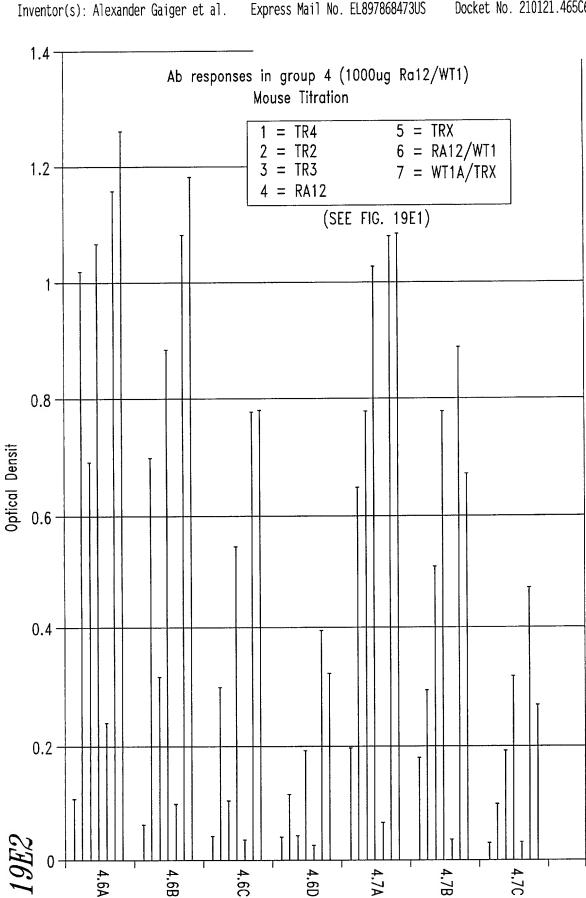
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WT1. Dose Titration. Ab responses to WT1. 1000ug Ra12-WT1+MPL-SE. A: 1:500 Dilution, B: 1:2000, C: 1:8000, D: 1:16000

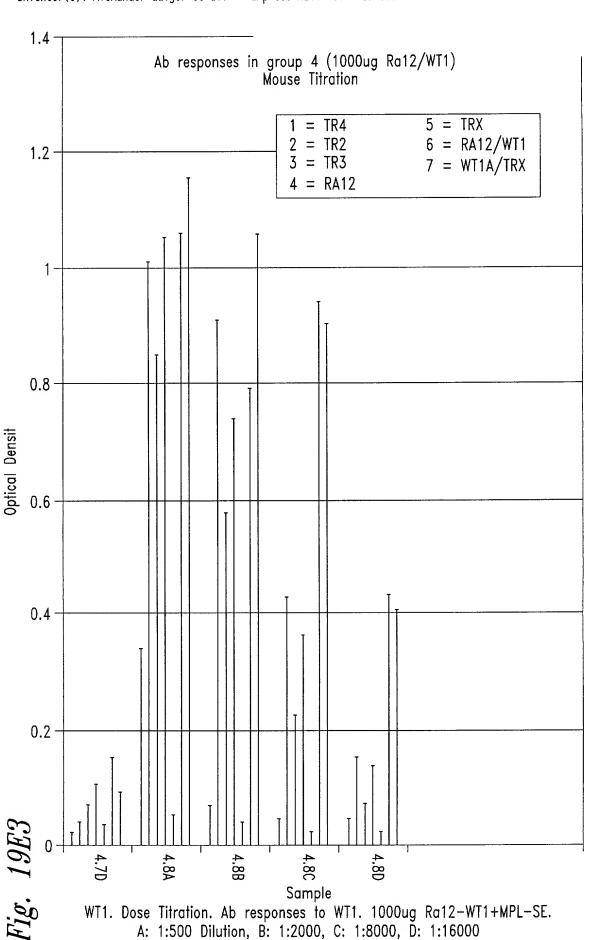


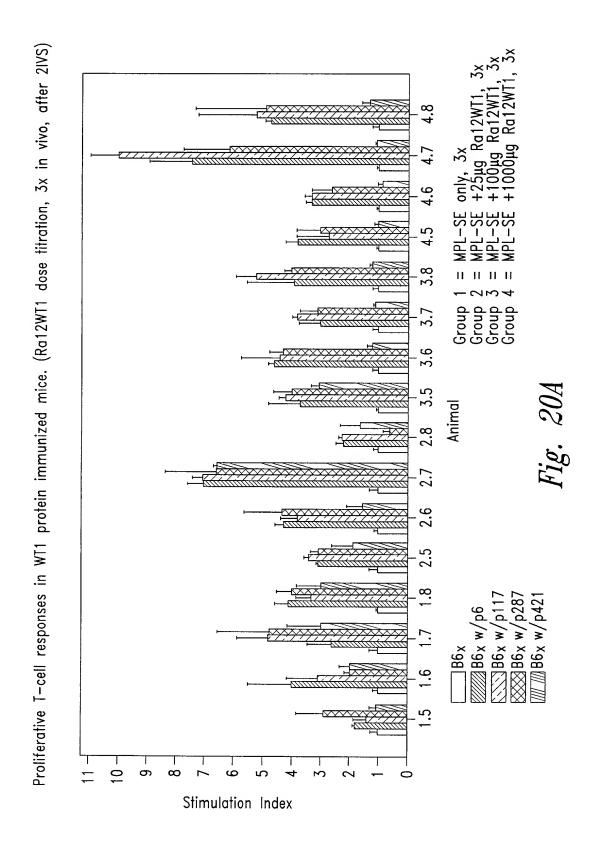




WT1. Dose Titration. Ab responses to WT1. 1000ug Ra12-WT1+MPL-SE. A: 1:500 Dilution, B: 1:2000, C: 1:8000, D: 1:16000

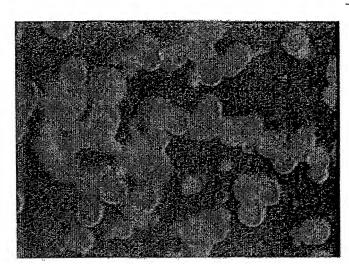
Sample



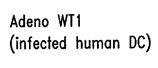


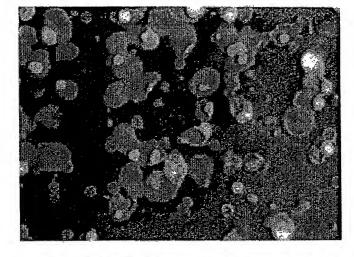
Proliferative T-cell responses in WT1 protein immunized mice. (Ra12WT1 dose titration, 6x in vivo, after 2IVS) 7 3 Stimulation Index

WT1 expression in human DC following adeno WT1 and Vaccinia WT1 infection



Control (uninfected human DC)





Vaccinia WT1 (infected human DC)

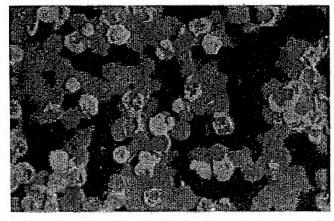
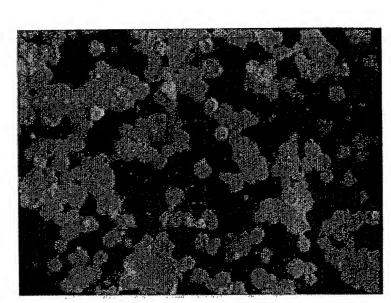


Fig. 21

Inventor(s): Alexander Gaiger et al. Express Mail No. EL897868473US Docket No. 210121.465C6

WT1 can be expressed reproducible in human DC following adeno WT1 infection and is not induced by a control Adeno infection

Control (Adeno EGFP infected human DC)



Vaccinia WT1 (infected human DC)

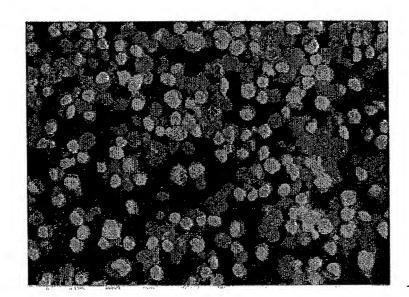
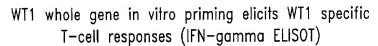


Fig. 22



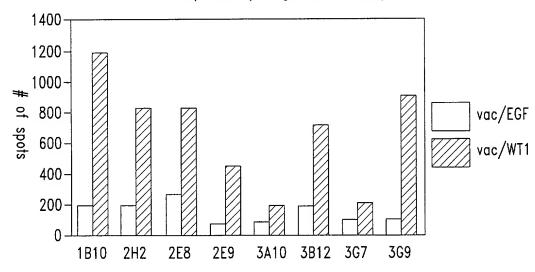


Fig. 23